

Marked up Version of Claims Amended, April 5, 2001:

(with insertion and deletion indicated in boldfaced underlining and brackets, respectively)

4. (Amended) A spread spectrum signal processing apparatus [according to claim 2, characterized in that:] having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said signal processing means includes a plurality of delay elements for delaying a signal by a time [duration] corresponding to a length of said divided code, and

each of said delay elements is connected in cascade, and an output of said correlator is connected to an input of each of said delay elements and to an output of a last stage of said delay elements.

5. (Amended) A spread spectrum signal processing apparatus [according to claim 2, characterized in that:] having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and a signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said signal processing means includes a plurality of delay elements for delaying a signal by a time **[duration]** corresponding to a length of said divided code, and an adder for summing a delay signal from said each delay element and said correlation signal, and

each of said delay elements is connected in cascade, and an output of said correlator is connected to an input of a first stage of said delay elements.

8. (Amended) A spread spectrum signal processing apparatus **[according to claim 2, characterized in that:]** having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said control means, until a peak of said correlation signal is detected, generates **[successively]** a divided code **[positioned at]** of a prescribed order in the arrangement order of said spreading code among the divided codes as said reference signal successively, said divided codes being obtained by dividing into a plurality of divided codes the spreading code of a prescribed length used to despread said spread signal, and **[said control means,]** after a peak of said correlation signal is detected, generates **[successively]** each of said divide codes in sequence as said reference signal successively from the next of said prescribed order.

Appendix B
Complete Set of Pending Claims, April 5, 2001

Attorney Docket: 9885-009

4. A spread spectrum signal processing apparatus having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said signal processing means includes a plurality of delay elements for delaying a signal by a time corresponding to a length of said divided code, and

each of said delay elements is connected in cascade, and an output of said correlator is connected to an input of each of said delay elements and to an output of a last stage of said delay elements.

5. A spread spectrum signal processing apparatus having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and a signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said signal processing means includes a plurality of delay elements for delaying a signal by a time corresponding to a length of said divided code, and an adder for summing a delay signal from said each delay element and said correlation signal, and

each of said delay elements is connected in cascade, and an output of said correlator is connected to an input of a first stage of said delay elements.

8. A spread spectrum signal processing apparatus having a correlator for correlating a spread spectrum signal with a reference signal, and processing a correlation signal from the correlator, characterized by:

control means for controlling supply of each of divided codes sequentially to said correlator as the reference signal in accordance with the order of arrangement in a spreading code, said each of divided codes being formed by dividing the spreading code having a prescribed length and used to despread said spread signal into a plurality of divided codes; and signal processing means for summing said correlation signal output corresponding to each of the divided codes and for outputting a summed result,

wherein, said control means, until a peak of said correlation signal is detected, generates a divided code of a prescribed order in the arrangement order

of said spreading code among the divided codes as said reference signal successively, said divided codes being obtained by dividing into a plurality of divided codes the spreading code of a prescribed length used to despread said spread signal, and after a peak of said correlation signal is detected, generates each of said divide codes in sequence as said reference signal successively from the next of said prescribed order.

10. The spread spectrum signal processing apparatus according to claim 8, characterized in that:

 said signal processing means comprises an A/D converter for converting said correlation signal into a digital signal, memory means for storing the digital signal from said A/D converter as data signal, and signal processor for summing said digital data corresponding to said each of the divided codes and for outputting the summed result, and

 said signal processor starts the summing of said digital data by making reference to the time at which said control means supplies said divided code to said correlator.

11. The spread spectrum signal processing apparatus according to any one of claims 4, 5, 8 and 10, characterized in that;

 said each of said divided codes is constituted to have an identical length.

12. The spread spectrum signal processing apparatus according to any one of claims 4, 5, 8, and 10, characterized in that:

 said correlator is a surface acoustic wave convolver, and

 said each of the divided code has the same length as or shorter length than an interaction length of said convolver.

13. A spread spectrum communication system for performing communication using a spread spectrum signal between at least two communication equipments, characterized in that:

 said communication equipment comprises synchronization detecting means for performing synchronization recognition of said spread signal, and disspreading means for performing disspreading on said spread signal by making reference to a synchronization recognition signal from said synchronization detecting means, and

 said spread spectrum signal processing apparatus according to any one of claims 4, 5, 8, and 10 is applied to either of said synchronization detecting means or said disspreading means.